

Remarks

Claims 1-9 were pending in the present application prior to this response. Claims 1-9 were rejected. Claims 1-9 have been amended herein. No claims have been canceled. Claims 10-16 have been added to the application and do not add any new matter to the application. Reconsideration of all rejected claims is requested.

I. **Rejection of Claims 1, 5, and 9 Under 35 U.S.C. §102(b)**

Claims 1, 5, and 9 were rejected under 35 U.S.C. §102(b) as being anticipated by Katoh (U.S. 5,796,430).

CLAIM 1

Claim 1 is independent and, as amended herein, is directed toward:

A digital imaging system comprising:

a photo detector, wherein dark current is outputable from said photo detector;

an analog-to-digital converter to convert the dark current output from the photo detector to at least one electric signal; and

a processor that measures the electric signal representative of the dark current and calculates the temperature of the photo detector based on the dark current measurement.

Some portions of claim 1 that are not disclosed by Katoh have been replicated above in bold type. The applicants note that Katoh relates to adjusting automatic gain control (AGC) within a camera and not to calculating the temperature of digital imaging components based on the dark current.

The Office Action cites several portions of Katoh in support of the rejection of claim 1. However, none of the cited portions of Katoh disclose, among other elements of claim 1:

a processor that measures the electric signal representative of the dark current and calculates the temperature of the photo detector based on the dark current measurement.

For example, the Office Action cites column 7, line 25 to column 8, line 15 in support of Katoh disclosing a processor as claimed in claim 1. The processor disclosed does not calculate the temperature of any components within the camera. Moreover, the camera disclosed in Katoh does not calculate temperature and certainly does not calculate temperature based on dark current. Rather, the camera disclosed in Katoh includes a temperature detecting circuit (1411), which is described, with reference to Fig. 14, at column 7, lines 24-30 as follows:

The video camera comprises: a lens 1401; an iris 1402; a sync signal generating circuit 1403; a solid state image pickup device 1404; an AGC circuit 1405; an A/D converting circuit 1406; a white spot noise correction circuit 1407; a signal processing circuit 1408; a D/A converting circuit 1409; a memory 1410; and a temperature detecting circuit 1411.
(emphasis added)

There is no mention in Katoh regarding the temperature detecting circuit (1411) calculating temperature, much less calculating temperature based on dark current. The applicants note that with regard to Fig. 15, Katoh discloses obtaining the temperature while other parameters are calculated. Accordingly, the applicants are of the impression that the temperature of Katoh is measured by some known electronic measuring device and is not calculated as the applicant claimed in claim 1.

As set forth above Katoh does not disclose all the elements of claim 1 and, therefore, Katoh cannot anticipate claim 1. The applicants request reconsideration of the rejection.

CLAIM 5

Claim 5 is independent and, as amended herein, is directed toward:

A method for thermal control of a digital imaging system comprising measuring the dark current of a photo detector; and
calculating the temperature of the digital imaging system based on the measured dark current.

Some portions of claim 5 that are not disclosed by Katoh have been replicated above in bold type.

Claim 5 was rejected on many of the same grounds as claim 1. Accordingly, the applicants incorporate the rebuttals to the rejection of claim 1 into this rebuttal of the rejection of claim 5.

As set forth above, the Katoh does not disclose "calculating the temperature of the digital imaging system based on the measured dark current." Moreover, there is no disclosure in Katoh related to calculating temperature based on any parameters. Accordingly, Katoh does not disclose all the elements of claim 5 and cannot anticipate claim 5.

Therefore, the applicants request reconsideration of the rejection.

CLAIM 9

Claim 9 is dependent on claim 5 and is allowable by way of its dependence and for other reasons. Accordingly, the applicants request reconsideration of the rejection.

II. Rejection of Claims 2-4 and 6-8 Under 35 U.S.C. §103(a)

Claims 2-4 and 6-8 were rejected under 35 U.S.C. §103(a) as being unpatentable over Katoh (U.S. 5,796,430) in view of Levine (U.S. 4,562,473).

Claims 2-4 and 6-8 are dependent on independent claims 1 and 5, which as described above, are now allowable. Therefore, claims 2-4 and 6-8 are allowable by way of their dependence in addition to other reasons.

The applicants request reconsideration of the rejections.

III. New Claims

Claims 10-16 have been added herein. Support for these claims is in the specification, accordingly, no new matter has been added to the application by these new claims.

In view of the above, all of the pending claims are now believed to be in condition for allowance and a notice to that effect is earnestly solicited.

Respectfully submitted,

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